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# ARNOLD ARBORETUM

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# POPULAR INFORMATION

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**Beech-trees.** The deciduous-leaved Beech-trees, to which the name of *Fagus* is given, are confined to eastern North America, northern and central Europe, southwestern Asia, western China and Japan. Ten species are recognized. Several evergreen Beech-trees, now placed in the genus *Nothofagus*, grow on the high Andes of Chile and southward to the straits of Magellan, and in Australasia. Some of these southern species are established in English parks and gardens, but none of them will grow in the eastern United States, and it is doubtful if they have been tried in southern California where some at least may be expected to grow. Eight of the ten species of *Fagus* and several varieties are established in the Arboretum. Two species, *F. multinervis*, found only on Dagelet Island in the Japanese sea fifty miles from the coast of central Korea, and *F. Hayatae*, known only to grow on a mountain in the Head Hunters' country of Formosa, have never been cultivated. Wilson visited Dagelet in 1907 and collected small plants of *F. multinervis* which unfortunately died before they reached the Arboretum. One species, *F. grandifolia*, is confined to eastern North America where it is a common tree from eastern Canada to Florida and eastern Texas, and to Minnesota and Oklahoma. At the north it grows on uplands and mountain slopes, often forms pure forests of considerable extent, and is rarely more than seventy or eighty feet tall; at the south it is taller, and in the Mississippi valley in northern Louisiana and western Mississippi it is often a magnificent tree one hundred and twenty feet high with a tall trunk from three to four feet in diameter. At the north it differs from other species of *Fagus* in the habit of often producing stems from the roots. These often grow into small

trees which form dense thickets round the parent trunk. The bark of all Beech-trees is smooth and pale, but that of the American tree is paler than that of the other species, and the pale blue bark of the stem and large branches make this one of the most beautiful of the inhabitants of the forests of eastern North America. It is a native tree in the Arboretum and there is a fine group planted on the western slope of Bussey Hill near the Valley Road. The oldest trees in this group were planted fifty years ago, and in it there is a specimen of the variety *caroliniana*, a southern form, which differs from the type in its thicker, more closely toothed leaves which remain on the branches nearly through the winter, and in the less crowded prickles on the fruit. This is a common tree on the bottom lands of southern streams and on the borders of swamps.

*Fagus sylvatica*, the European species, is a large tree common except in the extreme north, and grows to its greatest perfection in England, Denmark, parts of Germany, and on the mountains of the Balkan peninsula, often forming pure forests and growing to the height of a hundred feet. It is a hardy and handsome tree in New England where it is perfectly at home, and grows faster and is handsomer than the American species. Unfortunately there is no record of the date of the introduction of this tree into the United States, but it was certainly more than one hundred years ago. The earliest American mention of *F. sylvatica* which the Arboretum has been able to find was in the nursery catalogue of William Prince of Flushing, New York, in 1820, in which this tree was offered. It is a remarkable and unaccountable fact that the green-leaved typical form of *F. sylvatica* has been so rarely planted in this country. It was not sent to John Bartram with other European trees from England, and there is no reason to believe that it was known to George Washington, a great lover and planter of trees; and the Arboretum has been unable to hear of any large or old specimens in the neighborhood of Philadelphia or New York. The finest specimens of this tree in New England are undoubtedly those planted by the late David Sears in one of the four squares in Longwood which he presented to the Town of Brookline. There are now fourteen of these trees growing on what is called Longwood Mall near the Sears' Church, which vary in girth of trunk from seven feet two inches to ten feet ten inches, with heads of wide-spreading branches sweeping the ground. Unfortunately no record has been found when these trees were planted; it was certainly before 1832, at the time of one of Mr. Sears' visits in Europe. Three or four of these trees are the purple-leaved variety and the rest are magnificent specimens of the typical green-leaved tree. These are the finest exotic trees which have been planted in Greater Boston, and probably form the finest grove of European Beeches in the United States. There was until a year ago a magnificent specimen of the green-leaved typical tree standing near the house of the late Marshall P. Wilder on Columbia Road in Dorchester. He moved into the house in 1832 and the tree was planted by Mr. Wilder or its previous owner, the Honorable Increase Sumner, at one time Governor of Massachusetts. This tree has now been cut down to make room for an apartment house which is to replace the Wilder mansion. There are four good trees of the green-



leaved form on the Sargent Estate in Brookline, one planted by the late Augustus P. Perkins when a boy on Warren Street, near the corner of Cottage Street, and three on Warren Street on what is generally known as the Head Place. The house on this land was purchased by Stephen H. Perkins in 1840 who probably planted the trees shortly afterwards, although his house was not taxed until 1844.

The European Beech was first planted in the Arboretum in 1875, but the proper pruning of this tree was too long neglected. As it did not promise to become a fine specimen it has been removed during the past year and replaced by a small tree. There are a number of varieties of *Fagus sylvatica* established in the Arboretum. The best known of these is the so-called Purple Beech (var. *purpurea*) with dark reddish purple leaves. This tree was originally found growing naturally in the forest in three or four places in central Europe, and the first account of it was published as long ago as 1680. Seedlings of this form often have purple leaves, and such seedlings often differ in shades of color, and to some of these seedlings names have been given. The Purple Beech is better known and more generally planted in this country than the typical green-leaved form, and for many years has been a favorite with tree planters in the northeastern states. The Copper Beech (var. *cuprea*), which is probably a seedling of the Purple Beech, has paler red leaves than those of that tree. An interesting form of *F. sylvatica* (var. *pendula*) is a comparatively low tree with slightly pendulous branches from which hang almost vertically the secondary branches, the whole forming a tent-like head almost as broad as high. This interesting form of the European Beech has been occasionally planted in the United States. The largest specimen in this country known to the Arboretum is growing in Flushing, New York, on what was formerly a part of the Parsons Nursery. A picture of this tree can be found in Wilson's "Romance of our Trees." Near it grows the finest specimen in America of the rare Chinese Golden Larch (*Pseudolarix*). These two trees have been in danger of destruction to make room for an apartment house, and it is good news that the city of Flushing has recently secured the land on which they are growing in order to preserve them. The Fern-leaf Beech (var. *heterophylla*) is distinguished by its variously shaped leaves, which on the same branch are long and narrow and more or less deeply lobed, pinnate or lacinate. Various names have been given to forms of this variety, but the variation is often so slight that it hardly seems worth while to distinguish them. The largest specimen of this tree in the United States grows on Bellevue Avenue in Newport, Rhode Island, on the grounds of the Redwood Library and Reading Room. Unfortunately it is not known when this tree was planted. Trees of this variety have been growing in the Arboretum since 1886. A form of the European Beech (var. *cristata*) with curled and twisted leaves, also obtained in England in 1886, is a slow-growing tree, only interesting as a curiosity and of no ornamental value. It is well established in the Arboretum, as is a dwarf form, a bush five or six feet high and ten or twelve feet in diameter, obtained as grafts from Kew in 1885 and doubtfully known in the Arboretum as var. *remilliensis*. More interesting is the variety *fastigiata*, on which all the branches grow erect and form a narrow pyramidal head, which promises to become a handsome and

useful addition to the trees of this habit, like the fastigate Red and Sugar Maples, the fastigate European Oak, the fastigate Tulip-tree, European Hornbeam, etc. The original fastigate Beech is growing at Dawyck in Peeblesshire, Scotland, and is a recent addition to the Arboretum collection where it was first planted in 1913. A form of the European Beech of uncertain origin with small leaves and slightly drooping branches, for which the Arboretum has not found a name, grows on the Wilder Estate on Columbia Road, but unfortunately has been mutilated to make room for building purposes. A similar tree, rather smaller in size, is growing on the estate in North Easton of the late Oliver Ames, Governor of Massachusetts from 1886-1888, a great lover and planter of trees. Small grafted plants from the Wilder tree are growing in the Arboretum, and grafts have been sent to Europe. This tree seems to deserve further attention.

*Fagus orientalis*, which is distributed from Asia Minor to northern Persia, differs chiefly from the European Beech in the lower prickles of the fruit which are changed into oblong linear lobes. Plants received from Europe have been growing in the Arboretum now for twelve years, and have proved perfectly hardy, growing rapidly, and promise to become handsome trees in this climate. It is too soon, however, to speak with entire confidence of their future.

**Chinese Beech-trees**, so far as now known, do not occur north of the central provinces where three species have been found, *Fagus longipetiolata*, *Fagus Engleriana* and *Fagus lucida*. The first of these Wilson found to be the common Beech of central and western China where it grows with Oaks, Maples and other deciduous leafed trees. It is usually a small tree not more than fifty or sixty feet tall, but in western Szech'uan it is a stately and handsome tree with a single trunk rarely divided near the base, and covered with very pale gray bark. *Fagus Engleriana* is common on the high mountains of north-western Hupeh and eastern Szech'uan where it often forms pure forests. Wilson noticed that the trunk of this tree always divides at the base into several divergent stems which do not attain much thickness or any great height, the tallest of which there is a record being not over seventy feet high. *Fagus lucida* is distinguished from the other Chinese species by the duller gray bark of the trunk which does not separate at the base, and by its thick and spreading branches which form a broad, flattened and somewhat rounded head. It is a tree sometimes seventy-five feet in height with a trunk three feet in diameter. This tree is common in some parts of Hupeh and Szech'uan in mixed woods. Young plants of these three Chinese Beeches, which were brought to the Arboretum in 1911, have been growing in the open ground since their arrival, and there is no reason to suppose they will not become permanent and handsome trees here.

**Japanese Beech-trees** are better known in the Arboretum as *Fagus Sieboldii*, which was first raised here in 1893 from seed brought from Japan by Professor Sargent, and *Fagus japonica* which was raised here a few years later. The former is one of the great trees of Japan, often growing to the height of ninety feet and forming a trunk three feet in diameter.